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J. K. ALLEN
PADDING FOR IRONER ROLL
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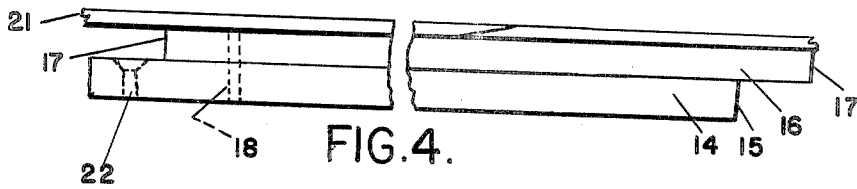
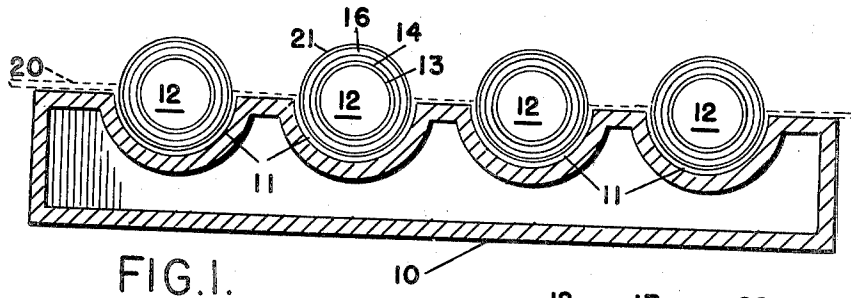
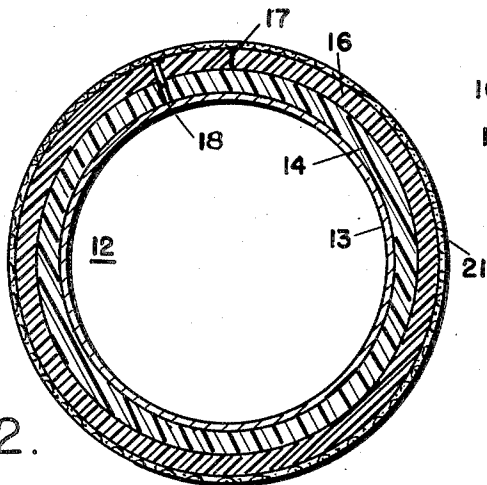
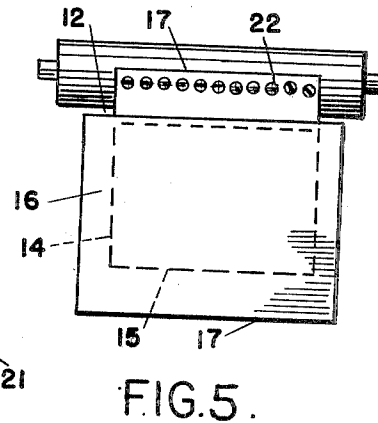


FIG. 2.

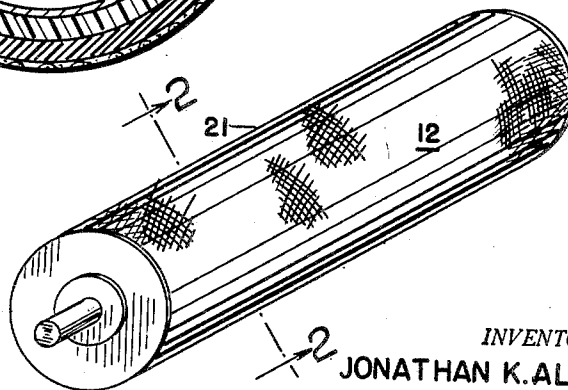


FIG. 3.

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2,757,442

PADDING FOR IRONER ROLL

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2 Claims. (Cl. 29—123)

This invention relates to mechanical or machine ironers employed in laundries for the ironing of fabrics, clothing and materials of a similar nature.

In the construction of rolls and ironing tables or steam chests for ironing flat work, the latter is heated by steam at about 100 lbs. pressure and develops a temperature of about 325° F. At this temperature rubber of ordinary types becomes too soft for use or is otherwise deteriorated and has been considered impractical for laundry purposes by the trade. Its use has therefore been in the discard from the time it was first suggested to the present time, in connection with its employment on the rolls used for ironing. The rolls themselves are conventionally without steam connections to make them hot. While they do get hot, such rise of temperature is brought about by the conduction of heat from the steam chest they work with. The temperature of the rolls reaches 350° F. or more, which is far above that which conventional natural or synthetic rubber can stand and still remain useful. In this invention, a plastic or resilient material termed neoprene, Hycar P21, polyethylene, having a high temperature resistance is employed in laminated form and wound around the roll and then covered with a suitable fabric to take up direct contact with the articles to be ironed. This material is capable of withstanding the temperatures used and has other manifest advantages, and while not primarily intended for this class of work, has been found empirically to meet the requirements in question.

This it does when used in the form herein described. The invention has for an object the provision of a new and improved roll padding for ironing purposes that will avoid one or more of the disadvantages and limitations of the prior art.

Another object of the invention is to provide a new and improved ironing roll padding for flat table work that will have a laminated impervious covering capable of withstanding the high temperatures incurred in the work, that will be able to dissipate the moisture arising from the pieces being ironed and have sufficient resiliency to conform to the irregularities of the articles being ironed and that will have wearing qualities of exceptional longevity.

Other objects will become apparent as the invention is more fully described.

For a clearer understanding of the invention and its objects reference is made to the accompanying drawings. These drawings when used in conjunction with the following description illustrate a particular form of the invention in its preferred construction while the claims emphasize the scope of the invention.

In the drawings:

Figure 1 is a side elevation of a set or rolls embodying this invention, operating on a steam chest or table for ironing articles of fabric, the table being shown in section;

Figure 2 is a section taken on line 2—2 of Figure 3; Figure 3 is a perspective view of the roll;

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Figure 4 is an enlarged detail of the covering used on the roll, shown in flattened form before winding; and

Figure 5 is a plan view of the roll and the method of anchoring the inner sheet to the roll and the outer sheet to the inner sheet.

Similar reference numerals refer to the same parts throughout the drawings.

In the structure shown in the drawings, a conventional steam ironing table or chest 10 provides a plane surface on which to pass the fabrics or clothing 20 to be ironed. There are arcuate depressions 11 periodically arranged in its upper surface for the rolls 12 to operate in and provide a pressurized action on the material. The steam chest is provided with a supply and exhaust for the steam in a conventional way, which are not shown. This steam raises the temperature of the table to about 310° F. or more for its contact with the fabric 20. The rolls 12 are actuated by mechanisms and power in a usual manner, which are not included in the drawings as they are well known to those skilled in the art.

The rolls are preferably of metal, and are journaled to the table and set at a suitable height and adjustably positioned to do the ironing correctly and effectively. In the construction shown the roll itself in each instance, is a cylindrical tube 13, on which is anchored and peripherally wound an inner non-metallic plastic sheet 14 of about 1/4" thickness and in one lamination with its end edges 15 butted together. The sheet 14 is anchored at 22 at its lead in edges to the roll to hold it thereon. Another sheet 16 of similar material and thickness but wider than sheet 14 is positioned peripherally over the inner sheet 14 and its edges 17 are butted out of line with the edges 15 of the inner sheet 14. The two sheets 14 and 16 are stapled together at 18 so they will be held together and in rigid contact with each other at their leading edges. A fabric covering 21 peripherally encases the outer plastic or resilient sheet and serves as the surface to impress the clothing passed through the machine in contact with the steam chest 10 and the rolls 12. During the operation of the machine, the heat of the chest passes to the material 20 as it passes along between the rolls and chest, especially as pressure is exerted by the rolls at the same time. The heat is conducted to the rotating rolls and since the covering 21 is thin, the moisture is removed from the ironed piece and dissipated. The laminations 14 and 16 are non-absorbent and assist in this, because they do not allow the moisture to pass further into the roll. The laminations are resilient and water resistant, and have great thermal strength. The outer lamination 16 being wider allows its outer edges to bend down over the lamination 14 and prevents any abnormal stresses being caused in it. This also maintains resiliency of the inner lamination. The outer lamination 16 is heated but is able to withstand it, and in fact temperatures substantially in excess of that met with in the operations. This increased heating of the padding therefore is of great advantage in providing hotter rolls for faster drying and increased production. In this form the padding is found more suitable than steel wool, rubber, asbestos, cotton and other materials now commonly used in connection with this type of ironing. It is able to withstand considerable service without expensive maintenance and by reason of its resiliency does a good job of the ironing. The plastic material is of solid synthetic sheet made to withstand a temperature of 350° F. without cracking or becoming crusty, gummy or tacky. It has a resiliency due to its fairly low durometer test, when cold its durometer test ranges between 40 and 60, when heated above normal it becomes more pliable and on the durometer reads 25 to 30. However up to 350° F. it retains its mechanical strength and heat resisting capacity. It is water resistant, tough in elasticity and

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lasts indefinitely. Although the material used is mentioned as neoprene it is fully appreciated that any other type of synthetic resilient material can be used that will stand the high temperatures used in this invention.

While but one general form of the invention is shown in the drawings and described in the specification, it is not desired to limit this application for patent to this particular form as it is appreciated that other forms of construction could be made that would use the same principles and come within the scope of the appended claims.

Having thus described the invention, what I claim is:

1. A roll for an ironing machine; said roll comprising a hollow roller having closed ends, shafting projecting from said ends for mounting said roller for rotation above and in close proximity to the steam chest of an ironing machine, an inner sheet of non-metallic plastic material completely encircling a major part of said roller, means anchoring one end of said plastic sheet to said roller, the other end of said plastic sheet abutting the first mentioned end, a second sheet of non-metallic plastic material completely encircling the first mentioned sheet and having at least one end stapled to the first mentioned sheet, the ends of the second mentioned sheet lying in abutting relation, and a fabric covering enclosing the

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second mentioned sheet and serving to retain the sheets in assembled relation on said roller, said plastic sheets having the property of being able to withstand temperatures of approximately 325° F. without deterioration and said second sheet being wider than the first mentioned sheet and having its sides extending beyond the sides of the first mentioned sheet.

2. A roll of the type described in claim 1, in which the line of contact of the abutting edges of each of the plastic sheets is out of alignment with the corresponding line of contact of the other sheet.

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